

## **RURAL SPRAWL: PROBLEMS AND POLICIES IN EIGHT RURAL COUNTIES**

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### **Abstract**

ERS has identified 113 nonmetropolitan counties with potential sprawl problems in the 1980's (Brown, 2000). This paper focuses on eight of these rural sprawl counties, assessing local sprawl-related difficulties and mitigation policies using information from phone interviews with local officials and from national data sources tracking these counties during the 1980's and the 1990's.

### **Introduction**

With the economic boom of the 1990's, attention has focused increasingly on the form of development and implications for local quality of life. State and local officials who survived the decade of the eighties by promoting growth often found angry school boards, environmentalists, and citizen groups complaining about problems attendant to that growth. Even communities that responded with growth reduction strategies have found that these approaches may only confound their problems by spreading out the growth in a sprawling fashion that can put strains on the environment, prove costly in providing public services, and destroy the sense of community. A new array of strategies called "smart growth" aims at limiting sprawl and related problems. This approach emphasizes preserving open space (for example, through farmland preservation), limiting and focusing growth (through zoning) in existing urban areas or in relatively dense, cluster-style developments, and investing in infrastructure (such as public transit) that reduces congestion and encourages growth near this infrastructure.

To date, much of the research and discussion has concerned urban sprawl, located mainly in the suburbs and metropolitan fringe (Daniels, 1999; Persky and Wiewel, 1999). Less attention has been given to sprawl outside metropolitan areas. To help fill this gap, we contacted local officials in eight rural (nonmetropolitan) counties that we believed might be experiencing sprawl-type development. Our goal was to see what their views were of their own situation, including both their problems and the policies they are using to address these problems. While this kind of subjective, self-assessment approach has its limitations, we believe it sheds some light on issues arising in connection with rural sprawl and how they vary from place to place.

### **Selecting the Case Study Counties.**

We started with a group of 113 nonmetropolitan counties that Dennis Brown had earlier identified as having potential sprawl problems as of 1990 (Brown, 2000). Each of these "rural sprawl counties" had relatively high rates of population and housing growth (1980-90); a high percentage of housing not served by a public wastewater system in 1990; a high mean travel time to work in 1990; and a high percentage of commuters that drove alone to work in 1990. The two growth indicators were included because sprawl-related problems ought to be most evident during and immediately after rapid growth creates a disconnect between where people live and where they work, shop, and get public services. The public wastewater indicator was used to identify places where much of the population had settled outside of the built-up areas with wastewater systems, with the potential to cause environmental problems. The travel time and commuter variables measured the disconnect between home and work and possible traffic congestion problems. To qualify as a rural sprawl county, the county had to be above the nonmetropolitan average on all 5 measures, and at least one standard deviation above average on at least two of the measures. As shown in Figure 1, these counties tend to be concentrated in the South.

For the current study, we selected eight of these counties based on four additional criteria. First, the county had to exhibit continued population growth during the 1990's. Second, we chose places with

different kinds of development—some were developing as classic bedroom communities, some were experiencing amenity-based growth associated with tourism and retiree-attraction, and some were a mix of these two. Third, we wanted to see what difference statewide growth management policies made, so we chose some counties in States known for these policies (Georgia, Pennsylvania, Vermont, Florida, and Washington) and some in States not known for these policies (Nevada, Texas, and Colorado). Fourth, we selected counties to reflect a cross-section of the nation, with most major regions represented.

The counties we selected for additional study were Citrus, Florida; Elbert, Colorado; Gilmer, Georgia; Lamoille, Vermont; Lyon, Nevada; Mason, Washington; Monroe, Pennsylvania; and Wise, Texas. Figure 1 shows that they are spread across the country, a notable exception being the Midwest—a region not well represented in our original group of 113 rural sprawl counties. Table 1 shows that the current populations of these 8 counties range from slightly under 20,000 for Elbert and Gilmer Counties to over 100,000 for Monroe and Citrus Counties. Their populations grew rapidly in both the 1980's and 1990's (1990 to 1999), but at varying rates. Citrus grew most rapidly in percentage terms in the 80's, but slowed down considerably in the 90's. Elbert grew most rapidly--more than 100 percent--in the 90's. Lamoille grew the slowest in both decades, its growth slowing to only 11 percent in the 90's.

**Table 1. Characteristics Of Case Study Counties**

County	Population	Percent Growth In Population		County Economic Type <sup>1</sup>	County Policy Type(s) <sup>1</sup>	Percent Commuting 1990 <sup>2</sup>
	1999	1980-90	1990-99			
Citrus, FL	116,111	71.0	24.2	Service	Retirement Transfer	17.1
Elbert, CO	19,757	40.8	104.8	Farming	Commuting	70.0
Gilmer, GA	19,766	20.3	47.9	Manufacturing	Retirement	31.0
Lamoille, VT	21,935	17.7	11.2	Service	-----	24.1
Lyon, NV	31,459	347.1	57.3	Nonspecialized	Retirement Federal Lands Commuting	44.7
Mason, WA	50,357	23.0	31.3	Manufacturing	Retirement	36.3
Monroe, PA	128,541	37.9	34.3	Service	Retirement	27.6
Wise, TX	46,709	30.5	34.7	Nonspecialized	Commuting	43.1

<sup>1</sup> Economic and policy types are from the ERS county typologies defined in Cook and Mizer, 1994.

<sup>2</sup> Percentage of employed residents commuting out of the county for jobs, from the 1990 Census.

Source: USDA, Economic Research Service, based on population data from the Bureau of the Census.

The ERS county typologies show that several of these counties still retained substantial economic specialization as of the beginning of the 1990's, either in manufacturing (Gilmer and Mason) or farming (Elbert), while the others had become service-dependent or nonspecialized. Although all eight counties were located adjacent to metro areas, ERS identified only three as commuting counties in 1990: Elbert (east of Denver), Lyon (east of Reno and Carson City), and Wise (north of Dallas/Fort Worth). However, Census data show that two other counties, Mason (west of Seattle) and Gilmer (north of Atlanta, east of Dalton) had over 30 percent of their employees commuting outside of the county for jobs in 1990. Five of our counties were retirement counties (one of these--Lyon--was both a retirement and commuting county). Lamoille, located east of Burlington, Vermont, fit into none of the ERS county policy types, however we knew it's economy relied significantly on amenity-based tourism (winter skiing and fall colors).

## Interviewing Methodology

We used telephone interviews to gather information on how growth and sprawl were affecting the community and which policies were being used to address sprawl-related problems. The interviews were conducted in June and July, 2000. In each county, various public officials responsible for housing, planning, transportation, public water and waste systems, schools, and other public services were contacted. Local chambers of commerce provided information about business conditions. USDA extension agents commented on impacts on farming and the local economy. County government leaders offered valuable information covering a wide array of issues.

## Problems

**Education.** School crowding was a common problem, particularly in Mason, WA, where retirees had consistently voted against school bonds needed to finance new school construction. Crowding was also a particular problem in Wise, TX, Elbert, CO, and Lyon, NV, the three counties in States without comprehensive planning legislation. In Wise County, school crowding problems were compounded by unrestrained growth in a mobile home park which produces many new students but little school property tax revenue. Elbert's extremely high growth rate exacerbates its school problems, which include both crowding and quality of education issues. Lyon has a bond issue proposed this fall to build a new high school that would reduce crowding, but this is strictly catch-up and does not address long-term future growth needs in education. Both Elbert and Lyon school representatives complained about the difficulty of hiring many new teachers while there is a nationwide shortage of teachers. And like in Mason County, Lyon officials noted the possibility that senior citizens might vote down the next school bond.

Gilmer, GA also had growth-related school crowding problems, and in addition was being forced to reduce class sizes to meet a new State requirement. To finance school expansion there, the county is collecting a new 1-percent sales tax. Lamoille, VT, which is growing slower than the other counties in this study, was making progress on its crowding problems, having recently passed a major school bond (after several failed attempts) to build a new middle school/high school complex. The most innovative effort to address school crowding and related quality problems was in Lyon, which developed an interactive video system to provide more diverse curriculum to students spread over the county.

Elsewhere, school construction was keeping pace with demand, but schools still suffered from sprawl-related problems. For example, in Monroe, PA student demands were growing faster than the local tax base, so dollars spent per student had declined, and funds were inadequate for staff training. In Citrus, FL, school crowding was not a problem because most of the growth was in retirees with no children. But, because of the increasing dispersion of population, Citrus was having difficulty transporting its students over long distances to high schools.

**Transportation.** Most places reported significant congestion problems, particularly at rush hour and in tourist season. The main exception was in the lightly-populated Gilmer, which reported congestion only on weekends in tourist season, and some significant congestion where the new Wal-Mart is located. Gilmer also appears to have benefited recently from a new highway that may have alleviated congestion. Elsewhere, the biggest congestion problems involved major State or Federal roads, which tend to be inadequate to meet local needs. Several counties were planning new major roads to help alleviate congestion, though in one case (Citrus) a new road was expected to bring only more growth and congestion. Funding for local road maintenance and construction was a problem in most counties, due to inadequate tax base. Several counties (including Gilmer and Elbert) were facing a lot of pressure from new residents to pave dirt roads. Wise was repaving its roads for the first time in twenty years, and Monroe complained of inadequate funding to meet the high cost of maintaining and repairing its aging road system, which was under significant strain.

Most of these counties had some form of public transportation, but not enough to make much of a dent in congestion. In some cases, like Citrus, public transit was limited to a dial-a-ride system to take seniors on doctor's visits. Several counties used buses during tourist season, reporting success in

alleviating seasonal traffic. For example, Lamoille reported some success with its bus system servicing the mountain ski area, but it lacked funding to expand the system. Wise reported that its small State-run para-transit system helped, but more State funding was required for needed expansion and maintenance. Mason was the only county with an extensive public transit system that has successfully reduced congestion.

Several places were exploring the possibility of adding new public transportation systems. Lyon plans to create a senior service. Monroe talked about long-term plans for a light rail system for commuters. And Gilmer hoped to have stops on a planned Blue Ridge Mountain railroad that would serve tourists in the area. However, Elbert County, the most rapidly growing county we examined, reported serious commuter-related congestion, but had no public transit and reported no plans for any in the future.

**Water and Sewer.** Water-related environmental concerns tend to be most problematic where the environment is most sensitive to pollution problems, such as in Mason and Citrus (coastal areas), or in Western locations where water supply is more limited (Lyon, Wise, and Elbert). In Mason, the cost of environmentally friendly on-site home systems (septic tanks and wells) is so high that the cost of new housing outside the city of Shelton is becoming prohibitive, while the city's water/sewer system is overstrained already and slowing development there. In Citrus, most new homes are hooked up to central water, and regulations require treatment of runoff from construction. Many Citrus homes, however, continue to use septic tanks which are causing pollution. Thus, local environmental groups are fighting against expansion of the central water system, which is required for most development there. Meanwhile, Citrus is using landscaping and tree coverage projects to conserve water.

In Lyon, the widespread use of septic systems has recently become a problem in polluting ground water, which has led the county to begin requiring more developments to attach to, or build, sewer systems to prevent pollution. In addition, some Lyon developments have built their own systems, which proved to be of poor quality, requiring the County to pay for upgrades and repair. In Wise, growth is lowering water levels in the aquifer, and septic systems are threatening pollution. Flooding is also a concern in Wise, due to construction-related erosion. In Elbert, municipalities are fighting against annexation of surrounding land because their municipal water/sewer systems are already strained to capacity. Outside Elbert's municipalities, all development under ten acres requires a water system, and development under five acres requires sewers. And while Elbert is concerned about pollution from its own septic systems, it is more concerned about its neighbor, Denver, which recently bought land in Elbert to dump sludge from Denver's wastewater plant.

The other three counties (Monroe, Gilmer, and Lamoille) also face challenges playing catch-up in expanding sewer systems to meet growing needs. Of particular note was Monroe's concern that its new residents are unfamiliar with rural areas and are unable to properly maintain on-site systems. Consequently, Monroe is considering having the County manage these systems for residents. In Gilmer, which just expanded its water/sewer system, water pollution was of less concern than solid waste, because the local landfill is insufficient to meet growing needs. Lamoille's biggest water problem involves flooding, because there are no flood controls for its local bodies of water.

**Other Public Services.** Most reported problems maintaining public services, such as police, fire, and health. A typical complaint was that police were too few to cover all the area outside the municipalities; and volunteer fire departments were struggling to meet growing service needs. Some places reported recent gains in their attempts to fill these service gaps. For example, in Wise County, a new power plant and other forms of new commercial and industrial tax base are now helping to finance public service expansion, including expanded hospital and ambulance service. In Lyon, public services have mostly kept up with demand, though voters will be asked to approve a tax increase in November to pay for increased fire service costs.

Public services appear to be in the best shape in our counties in Washington and Florida—both States with strong comprehensive State growth management laws. Mason, WA reported few problems in meeting public service needs, though funding has been insufficient to increase service levels, in part because new strict drunk driving laws have crowded the jails, consuming almost two thirds of the

county's general fund money. Citrus, FL credited the way services are funded in Florida—through special municipal service benefit and taxing units—as providing sufficient funding to maintain adequate public service levels.

**Business Climate.** Most of our sprawl counties had already undergone significant growth of retail business in fringe areas, resulting in a restructuring of downtown into mostly tourist and specialty shops. While in some cases this has led to undesirable strip development, this is less of a concern to business representatives and local officials than the relatively slow growth of the nonretail business sector, which is viewed as a key to developing a good tax base. In some cases, slow business growth was attributed to the high cost of infrastructure. Where business must pay this cost, this discourages businesses from locating locally. Where counties must pay, limited county revenues may limit business expansion.

Business conditions varied considerably from place to place. In Citrus, the economy was diverse and booming. Similarly, Gilmer's economy was booming, with a shortage in construction workers, but further business development was limited by lack of infrastructure. Lamoille's economy was strong but not booming, backed mainly by the tourist and service industries. However, many of the new businesses employing residents of the Lamoille area are located outside the county, limiting local tax base. In Monroe, the business sector is mainly retail and services, with many newcomers commuting long-distance to Philadelphia or New York, so Monroe is building industrial and business parks to help diversify its economy. Lyon has a more diverse economy that is booming in the municipalities, but it lacks the retail base since many of its residents commute and/or shop in nearby Carson City or Reno. Mason, which also has a high level of commuting, is seeing its higher-paid local manufacturing sector decline, with these jobs replaced by lower-paid jobs in services. Moreover, efforts to attract higher-paid industries into the area have been stymied by restrictive land use regulations outside the city of Shelton and water/sewer system limitations inside the city. Although Wise has a diverse and booming economy, including oil and gas exploration, manufacturing, retail, and a new power plant, it recently enacted a new economic development sales tax to try to attract more business. In Elbert, business growth is better in the town of Elizabeth, where the town helps with payment for infrastructure, than out of town, where the county pays and where businesses assume the cost for installing water tanks for volunteer fire units.

**Affordable housing.** Most of these counties suffer from a lack of affordable housing. This is partly due to rapid population growth, which fills up available vacant housing and in some cases is so rapid that there is a shortage in the construction industry to build more houses (such as in Gilmer and Lyon). However, minimum lot size and other zoning requirements that add to the cost of housing are contributing factors to the lack of affordable housing. Only in Wise County, which had substantial unregulated growth in mobile homes outside town and city limits, was affordable housing available.

## Policies

**Comprehensive Plans.** Most of the counties we examined had some kind of comprehensive plan. Some plans went back 10 years or more, while others were more recent in origin. They varied a lot in what they covered. At one end of the spectrum were the plans covering Citrus and Mason Counties, in Florida and Washington, respectively--both States with strict State growth management laws (Weitz, 1999). Citrus's plan went into effect in 1989, and local officials viewed this as highly successful in reducing the county growth rate to more manageable levels during the 1990's. Mason's plan, which was required of all fast-growth counties in the State, was adopted in 1996. This plan is very restrictive, and was viewed as really needed because Mason's prior growth was uncontrolled, with no zoning at all in rural areas. However, Mason's current plan has been challenged in the courts, causing a moratorium on all development outside of the city of Shelton, and even in Shelton growth is limited due to inadequate infrastructure. Thus, the verdict is still out on how this is going to work out in Mason.

At the other extreme is Gilmer, GA. To date, the county has had no zoning, so growth and rural sprawl remains largely unrestricted. Following recent State legislation, Gilmer put together a plan in 1999, but it won't go into effect until 2001. Lamoille, VT also has no county plan to work with, since

development in New England is controlled by towns—though the State does encourage towns to collaborate on development to a certain degree.

Most other places had master plans of one form or another, and several counties are currently considering updating their plans. Wise, TX has a State-required master plan dating back to 1970 that provides for general subdivision ordinance and land use plans, and this has been viewed as working fairly well so far, though it excludes unincorporated areas because the county prohibits zoning outside cities. Lyon, NV has a 1990 master plan that suggests various local ordinances, and requires the county to track development with maps. Elbert, CO's 1996 plan identifies areas with different densities and provides regulations varying by developer lot size. Monroe, PA adopted a comprehensive plan in 1991, and recently replaced it with a new plan in 1999. Although most important development decisions are made at the municipality level, Monroe's plan provides suggestions for how the county and municipalities can cooperate to combat sprawl.

**Zoning.** Efforts to control growth and sprawl (which are related but not the same) depend to a large extent on zoning regulations affecting commercial and residential development. Although most places have zoning in towns, zoning restrictions are less common in the countryside. As noted earlier, Mason's new master plan is an obvious exception, applying strict regulations for development outside of town, but not inside of town. These regulations have significantly contained rural sprawl. Citrus also has strict zoning rules covering both commercial and residential development that restricts high use commercial development to prevent strip-style development and directs most new single-family housing to be located on a central ridge in the county, thereby limiting rural sprawl.

Elsewhere, zoning provisions mainly apply to towns and may do little to prevent rural sprawl. In some of these cases, zoning may actually be exacerbating the problem. As noted earlier, zoning is unconstitutional in rural areas in Wise, so its zoning and land use regulations pertain only to incorporated areas, where they restrict commercial development within designated corridors to limit strip development problems. Wise also has a minimum lot size of ½ acre in towns—such acreage minimums may be expected to expand the towns over time, contributing to sprawl. Zoning regulations in Monroe's municipalities generally limit acreage to a maximum of two acres, but larger-scale housing may locate out of town. Elbert's plan does identify some areas designated for higher densities, however its regulations are stricter for more dense development, making it more economical to build on 60-acre lots than on smaller lots, which probably adds to sprawl. In addition, Elbert's plan doesn't really address strip-style development problems. Lyon allows various lot sizes from 6,000 square feet to 20 acres, each with different zoning provisions. It was not clear that these provisions would help to prevent rural sprawl. Lyon also does not have separate zoning provisions for residential and commercial uses, but so far this has not contributed to strip development in the opinion of local officials. Although Gilmer has some land development ordinances, it has no zoning at all, and zoning isn't expected anytime soon, since the last county commissioner to propose zoning was thrown out of office. Thus, it appears that Gilmer is doing little to prevent the continued scattering of housing and development throughout the county. In Lamoille, loose zoning laws are blamed for most of the area's sprawl. Some towns in Lamoille do a better job at controlling development than others. This has resulted in a patchwork of either well-managed or loosely-regulated areas, with the latter allowing NIMBY (not in my back yard) type development that sometimes upsets more regulated neighbors.

Zoning and land use regulations in these counties tend to be aimed at reducing infrastructure-related problems associated with sprawl by requiring developers to provide infrastructure or by imposing impact fees or other types of special assessments on developers. In Monroe, however, State laws effectively prohibit impact fees, though large projects often end up paying for their own infrastructure, which tends to speed up the approval process. Elsewhere, various types of fees are sometimes negotiated on a case-by-case basis or vary depending on the place and form of development.

**Open Space and Farmland Preservation.** Several counties reported problems with losing timber or farmland to residential development, and small "hobby farms" were proliferating in some places. To help conserve open space and farmland, some county master plans make special provisions suggesting the use of conservation easements through a transfer or purchase of development rights (the latter is known as a

PDR). However, only in Lamoille, where the loss of agriculture and forestry is a big issue, has there been much use of these devices. Lamoille prides itself as leading the State of Vermont in acreage of land protected. Elsewhere, in Wise and Lyon Counties, preservation of green space was reported in connection with requirements that developers of subdivisions provide a certain amount of green space for parks or common areas. In Citrus, the State of Florida has purchased some land for conservation purposes. In Mason the State of Washington is offering money for PDRs, but these require local voter approval and none have been submitted yet.

## Conclusions

In this paper, we sought to provide some real-life examples of what is happening in selected rapidly-growing rural sprawl counties. While it is difficult to make any general conclusions from such a small and nonrandom sample, these examples show some of the difficult situations faced by rural sprawl counties and how they are dealing with their problems.

Two of the counties--Citrus, FL and Mason, WA—are notable out for their aggressive growth management strategies, both of which are containing rural sprawl as well as dealing with sprawl-related problems. Perhaps not coincidentally, both were required by their States to develop strong comprehensive county plans that require local zoning rules and practices that restrict sprawl and make sure that infrastructure and public services are provided to match growth. Both of these places were doing relatively well with respect to limiting growth, and they had fewer problems associated with public service provision. Both were also environmentally sensitive places with high-cost water infrastructure, and both lacked affordable housing.

Adopting such restrictive, smart-growth approaches, however, has not been equally successful in these two places. Citrus has been more successful in providing infrastructure for at least some growth to proceed, resulting in both business and residential growth. In contrast, Mason was suffering from a legal moratorium on rural growth, while growth in Mason's county seat, the city of Shelton, has been stymied by inadequate infrastructure. In addition, although both Mason and Citrus are retirement counties, only Mason was suffering from crowded schools due to seniors opposing school bonds.

The other six counties in our study did not appear to have the kind of strict comprehensive plans that would prevent or limit rural sprawl. These places did have zoning and land use provisions that helped assure that growth would be served by infrastructure—particularly in larger scale subdivision type development. Nevertheless, many of these places were suffering from crowded schools, where they were mainly playing a game of catch-up in constructing new schools and they had trouble hiring new staff. Also, students had to be transported longer distances to high schools. Other public services, like police and fire, were also having trouble meeting needs of increasingly dispersed populations.

One of the biggest problems for most of these places was their relatively slow growth in tax base compared with their growth in public spending needs. This follows from the lag time inherent between residential development and subsequent business development. Most of these places initially attract commuters or retirees, and only later do private services and other industries follow. Thus, their tax base is lower than in communities that are more stable with a good mix of both residential and commercial activity. The result is that most of these rural sprawl places complained of insufficient tax revenues to pay for school and infrastructure improvements. And without infrastructure improvements, most said they were having difficulty attracting more industry. Several officials noted that the only way to break out of this conundrum would be for their State to help out by paying for more of the infrastructure costs. One official suggested that such aid might be made conditional on the locality adopting more responsible growth management practices. However, another official pointed out that it was hard to get the State to sympathize with the problems of a rapidly growing area when other parts of the State were economically stagnant.

We found a host of other problems related to rural sprawl. Major roads were becoming more congested and with increased demands to pave rural roads in some places. Most of these counties had only limited public transportation that might reduce congestion and redirect development to higher

density places. Environmental difficulties associated with widespread use of on-site wells and septic tanks were a common problem in the 8 counties we examined. There was significant loss of farmland and open space in many of these places. Affordable housing was also lacking in most of these places, except in one county where its presence was blamed with aggravating the county's school crowding and fiscal problems.

Some counties are attempting innovative solutions to solve their sprawl-related problems, such as the use of new technology in on-site water systems, the use of conservation easements to protect open space, and the development of interactive video systems to improve educational access in widely separated schools. But such "smart" approaches were rarely mentioned by the local officials that we contacted.

Overall, most of the officials we contacted felt that growth was generally a positive thing, providing more jobs, income, and increasing the diversity of goods and services to these places. Hence, at least in the opinions of officials from this small set of counties, the problems associated with rural sprawl appear to be less important than the benefits of growth. As long as these perceptions persist, it seems unlikely that many local officials will do much to limit rural sprawl, unless States require them to do so.

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